To: JAMES D WALKER[jameswalker5@msn.com]
From: Rumrill, Nancy
Sent: Thur 8/31/2017 12:44:06 AM
Subject: FW: Gunnison UIC

United States Environmental Protection Agency

Nancy Rumrill (rumrill.nancy@epa.gov)

Drinking Water Protection Section (WTR-3-2)

US EPA, Region IX

75 Hawthorne St.

San Francisco, CA 94105

Phone (415) 972-3293

From: Rebecca Sawyer [mailto:rsawyer@excelsiormining.com]
Sent: Wednesday, August 30, 2017 2:48 PM
To: Rumrill, Nancy <Rumrill.Nancy@epa.gov>
Cc: Albright, David <Albright.David@epa.gov>; Johnson, AudreyL <Johnson.AudreyL@epa.gov>; Alison Jones (ajones@clearcreekassociates.com) <ajones@clearcreekassociates.com>; Doug Bartlett <dbartlett@clearcreekassociates.com>; Stephen Twyerould <stwyerould@excelsiormining.com>
Subject: Gunnison UIC

Nancy;

Excelsior Mining is providing the following information from the organic manufacturer we

anticipate using. Stephen said that you had requested this data.

Concentrations of BTEX in the pure organic (filtered kerosene) with the following detection limits are:

Benzene ND @ 0.50 mg/kg

Toluene ND @ 0.50 mg/kg

Ethylbenzene ND @ 0.50 mg/kg

Xylenes 5.13 mg/kg

The raffinate is projected to contain approximately 0.006% organic (60 ppm), so we can calculate the concentrations of BTEX by multiplying the concentrations in undiluted organic (in ppm) by 0.00006. BTEX concentrations will be:

0.50 ppm benzene x .00006 = 0.00003 ppm benzene

0.50 ppm toluene x .00006 organic = 0.00003 ppm toluene

0.50 ppm ethylbenzene x 0.00006 = 0.00003 ppm ethylbenzene

5.13 ppm xylene x 0.00006 = 0.0003 ppm

Excelsior would also like to discuss Section J of the UIC, in relation to the APP.

Section J: OPERATIONAL AND POST-RINSING AUDITS

The draft UIC permit says*: The Permittee shall verify that the pollutant fate and transport are behaving as predicted during the second (2nd), fifth (5th), tenth (10th), fifteenth (15th), and twenty-third (23rd) years after the commencement of Stage 1 Project operations. The Permittee shall conduct post-rinsing audits of the computer modeling that predicted the fate and transport of pollutants discharged during Stage 1, 2, and 3 of Project operations after each stage is completed. For each audit, the Permittee shall submit a report to EPA describing the audit results as well as any changes in the conceptual model, any model redesign, and any changes in predicted operational and post-rinsing conditions. The schedule for these audits may be adjusted, depending on the progress of Stage 1, 2, and 3 operations, subject to EPA review and approval.*

Please note that, we did not do fate and transport modeling (which would include attenuation and degradation). However, we did do particle tracking using the groundwater flow model. If possible, we would like the language in the UIC to be consistent with the following from the current draft APP:

2.7.4.8 Groundwater Flow Model Evaluation and Update Report

The permittee shall submit a groundwater flow model evaluation and update report in accordance with the Compliance Schedule in Section 3.0. After the completion of the first year of operation for each of the three stages and every five (5) years thereafter for Stages 1 and 3 until mine closure, the permittee shall update the groundwater flow model.

Table 3.0 of the Compliance Schedule says

Within 6 months of completion of the first year of operation for each Stage and within 6 months after every 5 years thereafter for Stages 1 and 3 until mine closure

Looking forward to discussing these topics as well as the draft UIC comments on tomorrow's call.

Thank you,

Rebecca A. Sawyer

Vice President, Sustainability

2999 North 44th Street, Suite 300

Phoenix, Arizona 85018

rsawyer@excelsiormining.com

Cell: 520-368-1772

Direct: 602-559-5583

www.excelsiormining.com